



Standardized Tests and Students with an Autism Spectrum Disorder

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What are standardized tests?

Standardized tests can include a variety of tasks designed to garner knowledge about an individual or group's knowledge, abilities or other traits. These sets of tasks are carefully assessed to ensure that they validly and reliably measure given characteristics. Typically, this process involves administering the test to a sample of individuals who are representative of the population on whom the test will be used. Standardized tests may be administered individually or as a group.

A discussion of group administered standardized tests, such as the I-STEP, is certainly important but will not be addressed here. Students' scores on these tests have less impact on intervention and programming decisions for individual students. Often, group administered tests serve only as a screening procedure for referring students for special education eligibility assessments or, more obviously, for assessing the achievement of the school as a whole. Group administered assessments are rarely adequate for assessing an individual student's academic performance. Because they were developed with the needs of individuals with autism in mind, standardized assessments used to diagnose autism, such as the Autism Diagnostic Observation Schedule (ADOS) (Lord, Rutter, DiLavore, & Risi, 2000), are also omitted from this discussion.

What are individually administered standardized tests?

Most state and local educational agencies require the use of individually administered standardized tests when making special education eligibility decisions. Selected tests may include intelligence tests (which yield IQ or ability scores), academic tests (which measure achievement), and personality tests (which yield emotional or behavioral information). It is the responsibility of the school psychologist to select which tests will best provide information to address the referral question. Once tests are selected, the school psychologist makes decisions about how to best administer the instrument and interpret the results. Standardized assessment tools have rigid administration guidelines. The obtained scores are only valid if these guidelines are followed.

What does this have to do with autism?

For students with autism spectrum disorders (ASD), standardized assessments present a host of difficulties. When testing children with ASD, it may be difficult or impossible to adhere to the administration guidelines and still elicit the student's best performance.

Tests that are highly dependent on language comprehension, for example, may be biased against students with ASD (Watson & Marcus, 1999). Specifically, tests that require lengthy verbal directions and verbal responses are almost always inappropriate. Even on the performance subtests, receptive language skills are required to understand the directions. The communication deficit faced by all students with ASD puts them at a disadvantage on tests dependent on receptive and expressive language use.

Other characteristics of Autism spectrum disorders affect the standardized testing situation. In addition to language skill deficits, a student with ASD may lack other skills required in the testing situation. Students with

ASD, regardless of level of functioning, possess deficits in social skills. Standardized tests require some level of social interaction. It may be difficult to perform well on an individually administered assessment without reciprocal social interaction skills. Atypical interests, repetitive behaviors, stereotypic behaviors, disruptive behaviors, and inattention may further complicate the testing situation.

Aren't there any alternatives to standardized tests?

Yes, school psychologists may choose to administer nonverbal intelligence assessments to students with ASD, rather than altering the standardized administration procedures or foregoing the procedure all together. The Test of Nonverbal Intelligence, 3rd edition (TONI-3) is a valid and reliable alternative that does not require the examinee to read, write, speak, or listen. The Leiter International Performance Scale- Revised (Leiter-R; Roid & Miller, 1997) is another option. The Leiter-R, which does not require the student to use or to understand speech, has few timed items and will not penalize students for slow responses. While these instruments do minimize the communication difficulties that may interfere with obtaining the student's true score, they do require social interaction skills, attention to task, and other appropriate test taking behaviors that may be difficult for students with ASD.

At times, it may be possible for the psychologist to forgo the use of standardized tests during the assessment process (i.e., when the school district does not require the use of tests). Observations, interactions with the student, his teachers and parents, and other alternative sources of information may provide valuable information about areas of strength and areas needing improvement that can help guide the intervention and programming process. Even when standardized assessments are used, these additional sources should be included in the assessment.

What modifications can psychologists make to accommodate students with ASD when standardized tests are used?

- **Examiner:** Allow time to meet the student before entering the testing session. This may help to alleviate some anxiety and will allow you to better assess needed modifications.
- **Sensory:** Consider the student's sensory needs when conducting an assessment. For example, if he finds printed materials too visually stimulating, cover a portion so fewer problems are visible.
- **Routine:** Testing involves a significant disruption in the student's school day. For students on the autism spectrum, such disruptions can be very distressing. Consider meeting with the student in advance of the testing session to introduce yourself and to explain the upcoming schedule change. If the student uses a schedule, work with the teacher to include the testing session on his daily itinerary.
- **Environment:** If possible, administer the tests in a familiar environment for the student. Minimize all distractions. Open window blinds, noisy heating vents, unusual smells, and other environmental distractions may have a significant impact on the student's scores.
- **Time:** When possible, allow extra time for the student to finish items.
- **Directions:** Consider the auditory processing delays of students with ASD. Standardized directions are often lengthy and confusing. This can be particularly problematic for children with receptive language difficulties. Make verbal directions as clear and concise as possible. It may be useful to use visual directions or prompts or to allow the student to respond with gestures or signs.
- **Motivation:** To reduce the number of failures in a testing session, frequently intersperse new and challenging tasks with easier items. This may require administering items out of the standardized order or inserting nontest activities within subtests. It may also be helpful to use positive reinforcers to make the testing situation more motivating for the student.

- **Behavior:** Koegel, Koegel & Smith (1997) suggest assessing whether the student exhibits certain behavior that may interfere with the testing situation and then using positive reinforcers to reduce the rate of the interfering behavior. For a student who engaged in the obsessive, self-stimulatory verbal behavior of speaking in a "cartoon-like" voice, Koegel, Koegel and Smith allowed the voice only when responding to the test stimuli.

The preceding modifications will likely improve the student's performance. When administration of various intelligence assessments is altered to accommodate for motivation and attention variables, some students who previously scored in the mentally retarded range with standard administration can score in the average or low-average range of cognitive functioning (Koegel, Koegel & Smith, 1997).

Employing such strategies **will** break the standardization of the assessment tool, and you cannot generate standard scores. The psychologist will, however, garner much information about the individual student's strengths and areas for improvement-- information that will be crucial in making effective intervention and programming decisions.

References

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Roid, G.H. & Miller, L.J. (1997). *The Leiter International Performance Scale- Revised Edition*. Lutz, Florida: Psychological Assessment Resources.

Watson, L.R. & Marcus, L.M. (1995). Diagnosis and assessment of preschool children. In E. Schopler & G.B. Mesibov (Eds.). *Diagnosis and assessment in ASD*. (pp.271-301). New York: Plenum Press.

Recommended Reading

Shriver, M.D., Allen, K.D. & Mathews, J.R. (1999). Effective assessment of the shared and unique characteristics of children with autism. *School Psychology Review*, 28, 538-558.

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